

Title (en)
CONTROL CIRCUIT FOR ELECTRIC LEAKAGE CIRCUIT BREAKER

Title (de)
STEUERSCHALTUNG FÜR FI-SCHUTZSCHALTER

Title (fr)
CIRCUIT DE COMMANDE DE DISJONCTEUR DIFFÉRENTIEL

Publication
EP 3240130 A1 20171101 (EN)

Application
EP 17167888 A 20170425

Priority
KR 20160052316 A 20160428

Abstract (en)
A control circuit for an electric leakage circuit breaker, capable of preventing an error in determining an electric leakage generation due to an offset voltage of an input amplifier, including, a zero phase current transformer (10) configured to detect a zero phase current on a circuit as a leakage detection signal, a filter circuit section (20) configured to remove a high frequency noise included in the leakage detection signal, an input amplifier (30) configured to amplify a voltage formed by a current of the leakage detection signal and an impedance of the filter circuit section, and includes a pair of transistors (Q1, Q2), a base current generator (60) commonly connected to the bases of the pair of transistors and configured to supply the same amount of base current to the pair of transistors, and a trip determination circuit section (40) configured to determine whether to output a trip control signal.

IPC 8 full level
H02H 3/33 (2006.01); **H01H 83/02** (2006.01); **H03F 3/45** (2006.01)

CPC (source: CN EP KR US)
G05F 1/575 (2013.01 - CN); **G05F 3/265** (2013.01 - KR); **H01H 9/54** (2013.01 - US); **H01H 71/123** (2013.01 - EP US); **H01H 83/02** (2013.01 - EP KR US); **H01H 83/10** (2013.01 - KR); **H02H 3/162** (2013.01 - KR); **H02H 3/33** (2013.01 - EP US); **H03F 3/456** (2013.01 - EP); **H02H 3/105** (2013.01 - US); **H02H 3/16** (2013.01 - US); **H02H 7/04** (2013.01 - US); **H03F 3/456** (2013.01 - US)

Citation (search report)

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- [Y] US 4639684 A 19870127 - LAUDE DAVID P [US]
- [Y] US 6636111 B1 20031021 - GROSS WILLIAM H [US], et al
- [Y] US 2011234322 A1 20110929 - BOWERS DEREK F [US]
- [Y] EP 1518310 A1 20050330 - SHAKIRA LTD [IE]

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US11411385B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3240130 A1 20171101; CN 107340797 A 20171110; JP 2017199677 A 20171102; KR 102485879 B1 20230106; KR 20170123098 A 20171107; US 10559434 B2 20200211; US 2017316896 A1 20171102

DOCDB simple family (application)
EP 17167888 A 20170425; CN 201710296126 A 20170428; JP 2017090346 A 20170428; KR 20160052316 A 20160428; US 201715499789 A 20170427